



John R. Finnerty

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[Boston University Web Page](#)

| [Academia.edu](#) | [Google Scholar](#) | [iNaturalist](#) |

| [Research Gate](#) | [YouTube](#)

EDUCATION

Undergraduate	University of Pennsylvania Bachelor of Arts in Biology, 1989 <i>Magna cum laude</i>
Graduate	University of Chicago Doctor of Philosophy in Organismal Biology, 1994 <i>Departmental Award for Outstanding Dissertation</i>
Postdoctoral	University of Chicago Evolutionary Developmental Biology October 1994 – December 1998

ACADEMIC APPOINTMENTS

2009-2016	Director Boston University Marine Program
1999-present	Assistant / Associate Professor Boston University <ul style="list-style-type: none"> • Department of Biology; Marine Program; Graduate Program in Bioinformatics; • Graduate Program in Molecular Biology, Cell Biology and Biochemistry;

AWARDS & RECOGNITION

2013	Faculty Speaker , Boston University Matriculation Ceremony; Class of 2017
2013	Metcalf Award The Metcalf Cup and Award are Boston University's highest awards for teaching excellence. Each year, the Faculty Teaching Awards Committee selects one Metcalf Cup recipient and two Metcalf Award recipients.
2006	Gitner Award Distinguished Teaching in the College of Arts and Sciences, BU
1995	Outstanding Dissertation in Organismal Biology , University of Chicago
1988	Phi Beta Kappa National Honor Society , University of Pennsylvania

RESEARCH SUPPORT (PI = principal investigator)

- 2014-18 | “NF-kappaB in cnidarian development” [co-PI with Tom Gilmore (PI) and Trevor Siggers (co-PI)] NSF IOS-[1354935](#); \$600 K
- 2011-14 | “A functional systems biology approach to investigating the role of Wnt/Beta Catenin in regeneration.” [PI] NIH/NIGMS 1 F31 GM095289-01; (Graduate Fellowship for D. Stefanik) \$92 K
- 2009-14 | “Rel homology domain signal transduction pathways in the sea anemone *Nematostella vectensis*.” [co-PI with Tom Gilmore] NSF MCB-[0924749](#); \$573 K
- 2009-10 | “Possible functional diversification of the CP2 and p53 protein families from a common ancestor early in animal evolution—Evidence from the basal animal model *Nematostella vectensis*.” [PI, with fellow-PIs U. Hansen and Z-H Xiao] Genome Science Institute, Boston University; \$10 K
- 2008-11 | “Developmental evolution of facultative parasitism: Mechanisms underlying body plan remodeling in the sea anemone *Edwardsiella*.” [PI] NSF IOS-[0818831](#); \$200 K
- 2007-09 | “Microevolution of stress-response. Genetic, developmental, and molecular analyses of a unique NF-kB SNP.” [PI] NSF DEB-[0710098](#); (Dissertation Improvement Grant for J. Sullivan.) \$10 K
- 2006-07 | “Characterization of the NF-kB stress response pathway in basal animals—Implications for the evolution of immunity, the conservation of coastal ecosystems, and the identification of novel antimicrobial agents.” [PI] Boston University; Special Prog for Res. Init.; \$25 K
- 2005-08 | “Historical introductions and population dynamics of the widely introduced salt marsh anemone *Nematostella*.” [PI] Environmental Protection Agency / STAR Fellowship Program F5E11155 (Graduate fellowship for A. Reitzel); \$87 K
- 2002-05 | “Axial patterning during embryogenesis, asexual reproduction, and regeneration.” [PI; NSF, Evolution of Developmental Mechanisms: IBN-0212773; \$262 K
- 2002 | “An automated DNA sequencer for the Department of Biology at Boston University.” [co-PI] NSF 0301711; \$98 K
- 1998-02 | “The structure, evolution, and deployment of the hox cluster in a basal cnidarian.” [co-PI] NSF, Systematics program; 9727244; \$299 K
- 1994-96 | Developmental Biology Training Grant, NIH; University of Chicago.
- 1992 | Hinds Fund Research Award, University of Chicago; \$2.5 K.
- 1991-94 | Molecular Biology Training Grant. NIH; University of Chicago.
- 1990 | Sigma Xi Research Award.
- 1989 | Searle Fellowship, University of Chicago.

PhD ADVISEES					
Name	Yrs	Prog	Publications	Grants & Awards	Current Position
Patrick Burton	'00-05	EBE	20,23,29,32,36,51	Deans Fellowship; Belamarich Award*	Associate Professor Wabash College
John Darling	n/a	SPR	25,29,30,46		Research Scientist EPA
Joseph Ryan ¹	'01-07	BF	18,29,32,33,38,40		Assistant Professor U. Florida
Maureen Mazza	'99-07	CM	29,32,38,39,52,57		Legal Administrator Bergman & Song, LLP
Adam Reitzel	'02-08	EBE	25,29,30,31,35,36, 43-49,53-55,57,59, 71-73,75	Deans Fellowship, EPA STAR Fellowship, Belamarich Award*	Assistant Professor UNC Charlotte
James Sullivan	'03-08	EBE	28,29,31,33-35,37, 40,41,43-49,53-55, 60	Deans Fellowship; NSF DDIG	Associate Director Vertex Pharmaceuticals
Nikki Traylor- Knowles ²	'05-11	PER	48,54,56,61,62,75	Warren-McLeod Fellow; NSF EASPI	Assistant Professor University of Miami
Derek Stefanik	'07-14	CM	59, 61,64,68,69,73, 75	Warren-McLeod Fellow; NIH F31	Postdoctoral Fellow U. Pennsylvania
Lauren Friedman	'09-14	CM	68, 69, 77	Warren-McLeod Summer Fellow	Program Coordinator Harvard University
Tristan Lubinski	'09-14	EBE	61, 62, 73		Assoc. Scientist Informatics Astra Zeneca
Brian Granger ³	'09-15	BF	62, 73		Postdoc, Bioinformatics Astra Zeneca
Elizabeth Burmester ^{2,4}	'10-17	MB	76-79	Warren-McLeod Fellow;	Scientist, Billion Oyster Project
Kathryn Lesneksi ²	'13-	MB	79-80	Women Divers Hall of Fame; Warren- McLeod Fellow; PADI Foundation;	n/a
Linda Nguyen	'13-	CM	77		n/a
Karina Scavo ²	'14-	MB	79-80	NSF GRFP	n/a
Joanna C. Lee	'17-	MB		NSF GRFP	n/a

Co-advised by ¹A. Baxevanis (NIH/NHGRI), ²L. Kaufman (BU), ³D. Segré (BU), or ⁴R. Rotjan (NE Aquarium); Programs: BF=Bioinformatics; CM=Cell/Molecular Biol.; EBE=Ecol., Behavior & Evolution; MB=Marine Biol.; PER=Physiol., Endocrinology & Reprod.; SPR = Sci., Philos., & Religion; Publication numbers refer to co-authorship on Finnerty lab publications listed in this CV; *Outstanding Dissertation, BU Biology Department;

UNDERGRADUATE RESEARCH ADVISEES (40 out of ~60 total)

Name	Yr	Maj	Cr	Hon	Award	Pub	Graduate Program / Post-BA position
Grace Kwong	01	BI	0		LV	32	MA (2006) Florida Atlantic University
Michelle Eggen	03	BI	8		UROP		MA (2005) Boston University Med. School
Cassandra Krone	04	BI	12	●	UROP	36	PhD (2013) UMC Utrecht, Netherlands
Crystal Morales	05	BI	0				Research Associate, Beth Israel Hospital
Timothy Chu	06	BI	12	●		72	MD program, Boston Univ. Medical School
Michael D'Emic	06	BI	8	●			Instructor; Stonybrook Univ. Medical School
Alissa Assad	08	MR	4				Senior Applications Specialist, Meditech
Emily Cira	08	BI	0			43	PhD Program, Marine Biology, Texas A & M
Katherine Dubois	08	BI	4		UROP		Dentist; Alaska Island Community Health Ctr.
Maja Edenius	08	BI	8				PhD program, Biol. Oceanography, WHOI
Sara Edquist	08	BI	12	●	LV	43,72	PhD program, Zoology, Univ. New Hampshire
Izak Mizrahi	09	BI	4				graduate program, BU Medical School
Caitlyn Genovese	09	BI	4			72	PhD program, Biology, Univ. Hawaii
Brittany Wittenberns	09	BI	8				Veterinary School, University of Florida
Emma Chu	10	BI	8			64	MS/OD program, New Eng. Coll. Optometry
Jessica Duong	10	BI	8				applying to pharmacy school
Brendan Gillis	10	BI	12				PhD program, Marine Biology, Northeastern
Elizabeth Herdter	10	BI	4				MA Program, Marine Biology, South Florida
Pamela Braff	11	BI	4		UROP		MA Program, Natural Resources, Va. Tech.
Richard Rodriguez	11	BI	12				Research Associate, Columbia University
Christina Marmet	11	BI	8				MA Program, Marine Policy, Univ. Miami
Spencer Goodman	12	BI	8		CAS		unknown
Molly McCargar	12	MR	4				MA Program; Conservation; Columbia Univ.
Sarah McAnulty	12	MR	0				PhD Program in Cell. Dev. Biol. Univ. Conn.
Christina Stephens	12	MR	4				unknown
Noelle Olsen	13	MR	8				unknown
Joanna Grunin	13	MR	4				unknown
Cara Bornstein	13	MR	4				MS Program; Forensic Science; Pace Univ.
Erin McLean	13	MR	8	●			PhD program, Marine Biol., U. Rhode Island
Rachel Schweiker	13	MR	0		UROP		Content Developer at VocalID
Cassandra Smith	13	MR	0		UROP		Realtor, Prudential Lyons Group, Boston
Kyle Woehrl	13	MR	4				Landscape Gardener / horticulturist in
Rachel Filter	14	BI	4		UROP		Research Ass't, Brigham & Women's Hospital
Fareesa Hasan	14	BI	4		UROP		Neurodome Administrator, Boston University
Jessie Mathews	14	MR	0	●			Marine Sci. Educ., Sailfish Sea Expeditions
Lukas DeFilippo	14	MR	0	●		73	PhD program in Fisheries, Univ. Washington
Zachary Bengstton	15	MR	0	●		78-79	Research Tech., BU Microarray/Sequencing
Kirsten Kuhn	15	SE	4			78-79	Prog. Coordinator, BU Academic Advising
Joanna Lee	17	SE	4	●	NSF		PhD program, Marine Biology, Boston University
Erika Lee	18	HP	0		UROP		n/a

Yr. = grad year; Maj. = Major (BI=Biology; HP=Human Physiology; MR=Marine Science; SE=Science Education); Cred. = academic credits for research; Hon. = Honors thesis under my mentorship; Awards: CAS=[College of Arts and Sciences Summer Scholar](#); LV=[Larva Vincent Award](#) for Original Research in the [Marine Semester](#); UROP=[Undergraduate Research Opportunities Program](#); NSF=National Science Foundation Graduate Research Fellowship; Pub. Numbers refer to co-authorship on publications listed in this CV;

PUBLICATIONS (Lab members shown in bold; *corresponding author; citations from [Google Scholar](#) 02/2018)**1992**

1. **Finnerty JR**, Block BA* (1992) Direct sequencing of mitochondrial DNA detects highly divergent haplotypes in blue marlin (*Makaira nigricans*). Mol. Mar. Biol. Biotech. 1(3): [206-214](#). [cover photo] **98**

**1993**

2. Block BA*, **Finnerty JR**, Stewart AF, Kidd J (1993) Evolution of endothermy in fish: mapping physiological traits on a molecular phylogeny. Science 260 (5105): [210-214](#). [cover photo] **252**

1994

3. Block BA*, **Finnerty JR** (1994) Endothermy in fishes - a phylogenetic analysis of constraints, predispositions, and selection pressures. Environ. Biol. Fish 40(3): [283-302](#). **116**
4. **Finnerty JR**, Block BA* (1994) Accounting for endothermy in fishes - response. Science 265(5176): [1250-1251](#). **8**
5. **Finnerty JR** (1994) Molecular Phylogeny of the Scombroidei (Teleostei): Implications for the Evolution of Endothermy. [Dissertation, University of Chicago, Department of Organismal Biology & Anatomy] **0**

1995

6. **Finnerty JR**, Block BA* (1995) Evolution of cytochrome-B in the Scombroidei (Teleostei) - Molecular insights into billfish (Istiophoridae and Xiphiidae) relationships. Fish. Bull. 93(1): [78-96](#). **86**

1996

7. **Finnerty JR**, Master VA, Irvine S, Kourakis MJ, Warriner S, Martindale MQ* (1996) Homeobox genes in the Ctenophora: identification of paired-type and Hox homologues in the acentaculate ctenophore, *Beroe ovata*. Mol. Mar. Biol. Biotech. 5(4): [249-258](#). **32**

1997

8. **Finnerty JR**, Martindale MQ* (1997) Homeoboxes in sea anemones (Cnidaria: Anthozoa): a PCR-based survey of *Nematostella vectensis* and *Metridium senile*. Biol. Bull. 193(1): [62-76](#). **76**

1998

9. **Finnerty JR*** (1998) Homeoboxes in sea anemones and other nonbilaterian animals: implications for the evolution of the Hox cluster and the zootype. Curr. Top. Dev. Biol. 40: [211-254](#). **42**
10. **Finnerty JR**, Martindale MQ* (1998) The evolution of the Hox cluster: insights from outgroups. Curr. Opin. Genet. Dev. 8(6): [681-7](#). **97**

1999

11. **Finnerty JR**, Martindale MQ* (1999) Ancient origins of axial patterning genes: Hox genes and ParaHox genes in the Cnidaria. Evol. Dev. 1(1): [16-23](#). **135**
12. Roberts CW, **Finnerty JR**, Johnson JJ, Roberts F, Kyle DE, Krell T, Coggins JR, Coombs GH, Milhous WK, Tzipori S, Ferguson DJP, Chakrabarti D, McLeod R* (1999) Shikimate pathway in apicomplexan parasites - Reply. Nature 397(6716): [220](#). **12**

2000

13. **Finnerty JR*** (2000) Evolutionary developmental biology - Head start. Nature 408: [778-781](#). **11**

PUBLICATIONS (Lab members shown in bold; *corresponding author; citations from [Google Scholar](#) 2/2018)

14. Pasquinelli AE, Reinhart BJ, Slack F, Martindale MQ, Kuroda MI, Maller B, Hayward DC, Ball EE, Degnan B, Muller P, Spring J, Srinivasan A, Fishman M, **Finnerty J**, Corbo J, Levine M, Leahy P, Davidson E, Ruvkun G* (2000) Conservation of the sequence and temporal expression of *let-7* heterochronic regulatory RNA. *Nature* 408(6808): [86-89](#). **2362**

2001

15. **Finnerty JR*** (2001) Cnidarians reveal intermediate stages in the evolution of Hox clusters and axial complexity. *Am. Zool.* 41(3): [608-620](#). **29**


2002

16. Martindale MQ, **Finnerty JR**, Henry JQ* (2002). The Radiata and the evolutionary origins of the bilaterian body plan. *Mol. Phylogenet. Evol.* 24(3): [358-365](#). **89**

17. Roberts CW, Roberts F, Lyons RE, Kirisits MJ, Mui EJ, **Finnerty J**, Johnson JJ, Ferguson DJP, Coggins JR, Krell T, Coombs GH, Milhous WK, Kyle DE, Tzipori S, Barnwell J, Dame JB, Carlton J, McLeod R* (2002). The shikimate pathway and its branches in apicomplexan parasites. *J. Infect. Dis.* 185(Suppl.): [S25-S36](#). **164**

2003

18. Ryan JF, **Finnerty JR*** (2003) CnidBase: The Cnidarian Evolutionary Genomics Database. *Nucl. Acids Res.* 31(1): [159-63](#). **25**

 **19.** Schneider SQ, **Finnerty JR**, Martindale MQ* (2003) Protein evolution: structure-function relationships of the oncogene *beta-catenin* in the evolution of multicellular animals. *J. Exp. Zool.* 295B(1): [25-44](#). [*Faculty of 1000*: "Recommended"] **63**

20. **Finnerty JR***, Paulson D, **Burton P**, Pang K, Martindale MQ (2003) Early evolution of a homeobox gene: The ParaHox gene *Gsx* in the Cnidaria and the Bilateria. *Evol. Dev.* 5: [331-345](#). **86**

21. **Finnerty JR*** (2003) The origins of axial patterning in the Metazoa: how old is bilateral symmetry? *Int. J. Dev. Biol.* 47(7-8): [523-529](#). **80**



 **22.** Rokas A, King N, **Finnerty JR**, Carroll SB* (2003) Conflicting phylogenetic signals at the base of the metazoan tree. *Evol. Dev.* 5: [346-360](#). [cover photo; *Faculty of 1000*: "Recommended"] **99**

2004

 **23.** **Finnerty JR***, Pang K, **Burton P**, Paulson D, Martindale MQ (2004) Origins of bilateral symmetry: *Hox* and *Dpp* expression in a sea anemone. *Science* 304: [1335-1337](#). [*Faculty of 1000*: "Must read"] **336**




24. Martindale MQ*, Pang K, **Finnerty JR** (2004) Investigating the origins of triploblasty: "Mesodermal" gene expression in a diploblastic animal, the sea anemone, *Nematostella vectensis* (phylum, Cnidaria; Class Anthozoa). *Development* 131: [2463-2474](#). [cover photo] **297**



25. Darling JD, Reitzel A, **Finnerty JR*** (2004) Regional population structure of a widely introduced estuarine invertebrate: *Nematostella vectensis* Stephenson in New England. *Mol Ecol* 13: [2969-2981](#). [cover photo] **59**

PUBLICATIONS (Lab members shown in bold; *corresponding author; citations from [Google Scholar](#) 2/2018)**2005**

- 26. Finnerty JR*** (2005) Did internal transport, rather than directed locomotion, favor the evolution of bilateral symmetry in animals? *BioEssays*. 27: [1174-1180](#). 31
- 27. Martindale MQ, Finnerty JR*** (2005) A clue to the origin of the Bilateria? *Science* 307(5708): [353c-355c](#). 7
- 28. Sullivan JC, O'Neill T, Finnerty JR*** (2005) Bringing the urban environment into the classroom: learning from an estuarine mesocosm. *Urban Habitats* 3(1). 1
-  **29. Darling JD, Reitzel A, Burton P, Mazza M, Ryan JF, Sullivan JC, Finnerty JR*** (2005) A rising starlet: the starlet sea anemone, *Nematostella vectensis*. *BioEssays* 27: [211-221](#). [cover photo] 169

2006

- 30. Darling JA, Reitzel AM, Finnerty JR** (2006) Characterization of microsatellite loci in the widely introduced estuarine anemone *Nematostella vectensis*. *Mol. Ecol. Notes*. 6: [803-805](#). 8
- 31. Reitzel AM, Sullivan JC, Finnerty JR*** (2006) Qualitative shift to indirect development in the parasitic sea anemone *Edwardsiella lineata*. *Integ. Comp. Biol.* 46(6): [827-837](#). 12
- Highly accessed** **32. Ryan JF, Burton PM, Mazza M, Kwong GK, Mullikin JC, Finnerty JR*** (2006) The cnidarian-bilaterian ancestor possessed at least 56 homeoboxes. Evidence from the starlet sea anemone, *Nematostella vectensis*. *Genome Biol.* 7: [R64](#). 154
- 33. Sullivan JC, Ryan JF, Watson JA, Webb J, Mullikin JC, Finnerty JR*** (2006) StellaBase — the *Nematostella vectensis* genomics database. *Nucl. Acids Res.* 34: [D495-D499](#). 125
- 34. Sullivan JC, Buscetta KJ, Michener RH, Whitaker JO, Finnerty JR, Kunz TH*** (2006) Models developed from 13C and 15N of skin tissue indicate non-specific habitat use by the big brown bat. *Ecoscience* 13: [11-22](#). 35
- 35. Sullivan JC, Reitzel AM, Finnerty JR*** (2006) A high percentage of introns in human genes were present early in animal evolution—Evidence from the basal metazoan, *Nematostella vectensis*. *Genome Informatics*. 17(1): [219-229](#). 45

2007

- 36. Reitzel AR, Burton P, Krone C, Finnerty JR*** (2007) Comparison of alternate developmental trajectories in the starlet sea anemone *Nematostella vectensis* (Stephenson): embryogenesis, regeneration, and two forms of asexual fission. *Invert Biol.* 126: [99-112](#). 45
- 37. Sullivan JC, Kalaitzidis D, Gilmore TD, Finnerty JR*** (2007) Rel Homology domain-containing transcription factors in the cnidarian *Nematostella vectensis*. *Dev. Genes Evol.* 217: [63-72](#). 78
- 38. Ryan JF, Mazza ME, Pang K, Matus DQ, Baxevanis A, Martindale MQ, Finnerty JR*** (2007) Pre-bilaterian origins of the Hox cluster and the Hox code: Evidence from the sea anemone, *Nematostella vectensis*. *PLoS ONE* 2(1): [e153](#). 183
- 39. Mazza ME, Pang K, Martindale MQ, Finnerty JR*** (2007) Genomic organization, gene structure, and developmental expression of three clustered *otx* genes in the sea anemone *Nematostella vectensis*. *Mol. Develop. Evol.* 308B: [494-506](#). 42

PUBLICATIONS (Lab members shown in bold; *corresponding author; citations from [Google Scholar](#) 2/2018)

- 40. Sullivan JC, Ryan JF, Mullikin JC, Finnerty JR*** (2007) Conserved and novel *Wnt* clusters in the basal eumetazoan *Nematostella vectensis*. *Dev. Genes Evol.* 217: [235-239](#). 21
- 41. Sullivan JC, Finnerty JR*** (2007) A surprising abundance of human disease genes in a simple “basal” animal, the starlet sea anemone *Nematostella vectensis*. *Genome*. 50: [689-692](#). 28
-  **42. Putnam NH, Srivastava M, Hellsten U, Dirks B, Chapman J, Salamov A, Terry A, Shapiro H, Lindquist E, Kapitonov VV, Jurka J, Genikhovich G, Grigoriev I, JGI Sequencing Team, Steele RE, Finnerty JR, Technau U, Martindale MQ, Rokhsar DS*** (2007) Sea anemone genome reveals ancestral eumetazoan gene repertoire and genomic organization. *Science* 317: [86-94](#). [Faculty of 1000: “Exceptional”] 1169
- 43. Reitzel AM, Sullivan JC, Brown BK, Chin DW, Cira EK, Edquist SK, Genco BM, Joseph OC, Kaufman CA, Kovitvongsa K, Muñoz MM, Negri TL, Taffel JR, Zuehlke RT, Finnerty JR*** (2007) Ecological and developmental dynamics of a host-parasite system involving a sea anemone and two ctenophores. *J. Parasitology* 93: [1392-1402](#). 21
- 2008**
- 44. Sullivan JC, Reitzel AM, Finnerty JR*** (2008) Upgrades to StellaBase facilitate medical and genetic studies on the starlet sea anemone, *Nematostella vectensis*. *Nucl. Acids. Res.* 36: [D607-611](#). 24
- 45. Moran Y, Weinberger H, Sullivan JC, Reitzel AM, Finnerty JR, Gurevitz M*** (2008) Concerted evolution of sea anemone neurotoxin genes is revealed through analysis of the *Nematostella vectensis* genome. *Mol. Biol. Evol.* 25(4): [737-747](#). 56
- 46. Reitzel AM, Darling JA, Sullivan JC, Finnerty JR*** (2008) Global population genetic structure of the starlet anemone *Nematostella vectensis*: multiple introductions and implications for conservation policy. *Biological Invasions*. 10: [1197-1213](#). 39
- 47. Moran Y, Weinberger H, Sullivan JC, Reitzel AM, Finnerty JR, Gurevitz M*** (2008) Intron retention as a posttranscriptional regulatory mechanism of neurotoxin expression at early life stages of the starlet anemone *Nematostella vectensis*. *J. Mol. Biol.* 380: [437-443](#). 28
-  **48. Reitzel AM, Sullivan JC, Traylor-Knowles N, Finnerty JR*** (2008) A genomic inventory of stress responsive elements in the model organism *Nematostella vectensis*. *Biol. Bull.* 213: [233-254](#). [cover photo] 58
- 49. Sullivan JC, Sher D, Eisenstein M, Shigesada K, Reitzel AM, Marlow H, Levanon D, Groner Y, Finnerty JR, Gat U*** (2008). The evolutionary origin of the Runx/CBF β transcription factors and clues to their function – studies of the most basal metazoans. *BMC Evol. Biol.* 8: [228](#). 37
- 2009**
- 50. Finnerty JR*** (2009) The starlet anemone, *Nematostella vectensis*. pp. [373-376](#). in *McGraw-Hill Yearbook of Science and Technology*. McGraw-Hill. 0
- 51. Burton PM, Finnerty JR*** (2009) Conserved and novel gene expression between regeneration and asexual fission in *Nematostella vectensis*. *Dev. Genes Evol.* 219: [79-87](#). 44
-  **52. Finnerty JR, Mazza ME, Jezewski PA*** (2009) Domain duplication, divergence, and loss events in vertebrate *Msx* paralogs reveal phylogenetically informed disease markers. *BMC Evol. Biol.* 9: [18](#). <Press coverage: [Science Daily](#)> 28
- 53. Reitzel AM, Sullivan JC, Daly M, Finnerty JR*** (2009) Comparative anatomy and histology of developmental and parasitic stages in the life cycle of the lined sea-anemone *Edwardsiella lineata*. *J. Parasitology*. 95: [100-112](#). 13

PUBLICATIONS (Lab members shown in bold; *corresponding author; citations from [Google Scholar](#) 2/2018)

54. Sullivan JC, Wolesski FS, **Reitzel AM**, French CE, **Traylor-Knowles N**, Gilmore TD, **Finnerty JR*** (2009) Two alleles of NF- κ B in the sea anemone *Nematostella vectensis* are widely dispersed in nature and encode proteins with distinct activities. *PLoS ONE*. 4(10): [e7311](#). 37

2010

55. Reitzel AM, Sullivan JC, and Finnerty JR* (2010) Discovering SNPs in protein coding regions with StellaSNP: Illustrating the characterization and geographic distribution of polymorphisms in the estuarine anemone *Nematostella vectensis*. *Estuaries and Coasts*. 33: [930-943](#). 9

Highly accessed **56. Traylor-Knowles N**, Hansen U, Dubuc TQ, Martindale MQ, Kaufman L, **Finnerty JR*** (2010) The evolutionary diversification of LSF and Grainyhead transcription factors preceded the radiation of basal animal lineages. *BMC Evol. Biol.* 10: [101](#). 22

57. Mazza ME, Pang K, **Reitzel AM**, Martindale MQ, **Finnerty JR*** (2010) A conserved cluster of three PRD-class homeobox genes (*homeobrain*, *rx*, and *orthopedia*) in the Cnidaria and Protostomia. *EvoDevo*. 1: [3](#). 20

58. Finnerty JR, Wang W-X, Hébert SS, Wilfred BR, Mao G, Nelson PT* (2010) The miR-15/107 group of microRNA genes: evolutionary biology, cellular functions, and roles in human diseases. *J. Mol. Biol.* 402: [491-509](#). 247

2011

59. Reitzel AM, Stefanik D, Finnerty JR* (2011) A comparative analysis of clonal reproduction in Cnidaria reveals the underlying modular organization of cnidarian developmental programs. in: *Mechanisms in Life History Evolution*. T. Flatt & J. Heyland, eds. Oxford University Press. Oxford. pp. 101-113. 0

60. Ray PS, Sullivan JC, Jia J, Francis J, Finnerty JR, Fox PL* (2011) Evolution of function of a fused metazoan tRNA synthetase. *Mol. Biol. Evol.* 28: [437-447](#). 17



61. Wolesski FS, Garbati MR, Lubinski, TJ, Traylor-Knowles N, Dresselhaus E, Stefanik DJ, Goucher H, Finnerty JR, Gilmore TD* (2011) Characterization of the core elements of the NF- κ B signaling pathway of the sea anemone *Nematostella vectensis*. *Mol. Cell. Biol.* 31: [1076-1087](#). [cover photo] 35

62. Traylor-Knowles N, Granger BR, Lubinski T, Parikh JR, Garamszegi S, Xia Y, Marto JA, Kaufman L, Finnerty JR* (2011) Production of a reference transcriptome and a transcriptomic database (PocilloporaBase) for the cauliflower coral, *Pocillopora damicornis*. *BMC Genomics*. 12: [585](#). 58

63. Musson MC, Jepeal LI, Finnerty JR, Wolfe MM* (2011) Evolutionary expression of glucose-dependent-insulinotropic polypeptide (GIP). *Regul. Peptide*. 171: [26-34](#) 5

64. Wolesski FS, Chandani S, Stefanik DJ, Jiang N, Chu E, Finnerty JR, Gilmore TD* (2011) Two polymorphic residues account for the differences in binding and transcriptional activation by NF- κ B proteins encoded by naturally occurring alleles in *Nematostella vectensis*. *J. Mol. Evol.* 73: [325-336](#). 10

2012

65. Wolesski FS, Finnerty JR, Gilmore TD* (2012) Preparation of antiserum and detection of proteins by Western blotting using the starlet sea anemone, *Nematostella vectensis*. *Protocol Exchange*. doi:10.1038/protex.2012.057. 0

2013

66. Wolesski FS, Bradham CA, Finnerty JR, TD Gilmore* (2013) NF- κ B is required for cnidocyte development in the sea anemone *Nematostella vectensis*. *Dev. Biol.* 373: [205-215](#). 19

PUBLICATIONS (Lab members shown in bold; *corresponding author; citations from [Google Scholar](#) 2/2018)

67. Hudon DH, Finnerty JR* (2013) To build an ecosystem. An introductory lab for environmental science and biology students. *Amer. Biol. Teacher*. 75:186-192. 0



68. Stefanik DS, Friedman L, JR Finnerty* (2013) Collecting, rearing, spawning, and inducing regeneration of the starlet sea anemone, *Nematostella vectensis*. *Nature Protocols* 8:916-923. [cover photo] 35

69. Stefanik DS, Wolenski FS, Friedman L, Gilmore TD, JR Finnerty* (2013) Isolation of DNA, RNA and protein from the starlet sea anemone, *Nematostella vectensis*. *Nature Protocols* 8:892-899. 11

70. Wolenski FS, Layden MJ, Martindale MQ, Gilmore TD, JR Finnerty* (2013) Characterizing the spatiotemporal expression of RNAs and proteins in the starlet sea anemone, *Nematostella vectensis*. *Nature Protocols* 8:900-915. 27

71. Gilmore TD*, Tarrant AM, JR Finnerty (2013) A report from the second *Nematostella vectensis* research conference. *Dev. Genes Evol.* 223:207-211. 4

72. Reitzel AM, Chu T, Edquist S, Genovese C, Church C, Tarrant AM, Finnerty JR* (2013) Physiological and developmental responses to temperature by the estuarine sea anemone *Nematostella vectensis*: evidence for local adaptation to high temperatures. *Mar. Ecol. Prog. Ser.* 484:115-130. 10

2014

73. Stefanik DJ, Lubinski TJ, Granger BR, Byrd AL, Reitzel AM, DeFilippo L, Lorenc A, Finnerty JR* (2014) Production of a reference transcriptome and transcriptomic database (EdwardsiellaBase) for the lined sea anemone, *Edwardsiella lineata*, a parasitic cnidarian. *BMC Genomics*. 15:71. 25

2015

74. Finnerty JR*, Gilmore TD (2015) Methods for analyzing the evolutionary relationship of NF-κB proteins using free, web-driven bioinformatics and phylogenetic tools. *Methods Mol Biol.* 1280: 631-646. 2

75. Traylor-Knowles NG, Kane EG, Sombatsaphay V, Finnerty JR, Reitzel AM* (2015) Sex-specific and developmental expression of *Dmrt* genes in the starlet sea anemone, *Nematostella vectensis*. *EvoDevo* 6:13. 7

2017

76. Burmester EM, Finnerty JR, Kaufman L, Rotjan RD* (2017) Temperature and symbiotic state impact healing in experimentally wounded corals. *Mar Ecol Prog Ser.* 570: 87-99. 2

77. Mansfield KM, Carter NM, Nguyen L, Cleves PA, Alshanbayeva A, Williams LM, Crowder C, Penvose AR, Finnerty JR, Weis VM, Siggers TW, Gilmore TD* (2017) Transcription factor NF-κB is modulated by symbiotic status in a sea anemone model of cnidarian bleaching. *Scientific Reports* 7: 16025.

2018

78. Friedman LE, Gilmore TD, Finnerty JR* (2018) Intraspecific variation in peroxide sensitivity in the starlet sea anemone, *Nematostella vectensis*, an estuarine cnidarian. *PLoS ONE*. 13(1): e0188265. 0

In review

79. Scavo Lord K, Lesneski K, Bengtsson ZA, Kuhn KM, Madin J, Burmester EM, Morey J, Kaufman L, Finnerty JR* (in review) The viability of a reef coral population living on mangrove roots supports a role for mangroves as coral refugia. *Mar Ecol Prog Ser* n/a

SERVICE / BIOLOGY DEPARTMENT

Biology Department Curriculum Committee

- Served on committee responsible for evaluating new departmental academic policies and new Biology courses..

Undergraduate Honors Committee Service

- Amy Stryker [primary advisor]
- Chad Dow [primary advisor]
- Michelle Eggen [primary advisor]
- Tim Chu [primary advisor]
- Sarah Edquist [primary advisor]
- Emily Munday
- Joanna C. Lee [primary advisor]

Masters Thesis Committee Service

- Alison Leschen [Marine Biology];
- Alison Leschen [BU Marine Program];

PhD Dissertation Committee Service

- Eric Crandall [Marine Biology Graduate Program]
- Sara Greytalk Rothberg [Physiol., Endocrinology, and Reproduction Graduate Program]
- Charles Kieswetter [Ecology, Behavior, and Evolution Program; EBE]
- Maureen Mazza [Cell & Molecular Biology program; **1st Reader**]
- Suyama Meegaskumbura [EBE]
- Marcio Pie [EBE]
- Heather Shull [EBE]
- Justin Touchon [EBE]

Graduate Committee

- **2000-02, 2008-09 Committee Member**—Reviewed graduate student applications, participated in making admission and fellowship decisions and planning and execution of graduate student recruitment events.

Seminar Series Coordination

- **2000-01; 2004-05**—Coordinated the Ecology, Behavior, and Evolution weekly series

Training Grant Proposals

- **2001-2003**—Served on committee to draft an IGERT Proposal to the National Science Foundation in the area of Biodiversity.

Guest Lecturer

- **Lectured in Biology courses:** BI107 (4x), BI260 (6x), BI410 (2x), and BI442 (1x).

Faculty Merit Review Committees

- **2012; 2013**—Reviewed faculty CVs and annual reports and evaluated the performance of Biology faculty in the previous calendar years.

Faculty search committees

- **2000-01**—Assistant Professor of Ecology, Behavior and Evolution
- **2000-01**—Assistant Professor of Cell & Molecular Biology
- **2001-02**—Assistant Professor of Ecology, Behavior and Evolution
- **2008-09**—Assistant Professor of Marine Ecology
- **2009-10**—Assistant Professor of Evolutionary Genomics
- **2011-12**—Assistant Professor of Systems Biology
- **2015-16**—Assistant Professor of Marine Ecology / Genomics [search chair]
- **2015-16**—Instructor of Marine Biology & Ecology [search chair]

SERVICE / MARINE PROGRAM**Administration**

- 2009-16—Director
- 2016-17—Associate Director
- 2009-17—Director of Undergraduate Studies

Curriculum Development

- 2005-07—Served on 3-member committee that conceived the new interdisciplinary curriculum

Honors Committee Service

- Samantha Gifford, class of 2011
- Sarah McAnulty, class of 2011
- Cara Papyrikos, class of 2013
- Paul Riley, class of 2014
- Erin McLean, class of 2013
- Victoria Hanley, class of 2016
- Montana Airey, class of 2017
- Alex Ascher, class of 2017

Student Advising

- 2009-17—Faculty mentor for **Marine Science Association**, a registered student organization

SERVICE / COLLEGE OF ARTS & SCIENCES**Core Curriculum**

- 2002-03—Served on committee to overhaul CC106, a life sciences course for freshman non-science majors.
- 2004-06; 2008-11—Course Coordinator & web designer for CC106
- 2005-06—Lab Coordinator for CC106
- 2004-11—Authored and performed annual revision on the lab manual for CC106.

Earth Systems Forum

- 2010-11—Organizing Committee Member / Forum Speaker. Served on 10-member committee tasked with organizing a forum to showcase BU's existing strengths in Earth systems science and to catalyze new research initiatives.

Institute for Philosophy and Religion

- 2004—Invited commentator on a lecture by Steven Rockefeller entitled "Ecological and Social Responsibility: The Making of the Earth Charter."
- 2006—Invited commentator on a lecture by Holmes Rolston III entitled "Can Nature Be Evil: Naturalizing and Systematizing Evil."

Student Recruitment

- 2009-2014—Presented "Classroom Experience" lectures for prospective freshmen.

SERVICE / BOSTON UNIVERSITY**BU HUB / Initiative to Redesign General Educational at Boston University**

- 2016-2017—Member, HUB Implementation Task Force
- 2017—Member, HUB Task Force Subcommittee on Assessment

BU Matriculation Ceremony: [Faculty Salutation](#)

- 2013—Delivered faculty address to Class of 2017 at annual Matriculation Ceremony

Bioinformatics Program

- **1999-2001**—Member; graduate admissions committee
- **2003-04**—Member, faculty search committee
- **2006**—1st Reader, dissertation committee of Joseph F. Ryan
- **2008-2009**—Member, graduate admissions committee
- **2009**—Member, dissertation committee of Jike Cui
- **2012-2014**—Member, qualifying & dissertation committee of Evan Maxwell

BU School of Medicine

- **2007-08**—Dissertation committee member, Michelle Musson

Project STAMP

- **2004-2005**—Faculty advisor, “Science, Technology, and Mathematics Partnerships”

Responsible Conduct of Research

- **2011-2012**—Served as faculty facilitator for RCR Workshops.

Research Experience for Teachers

- **2004**—Hosted a 5th grade science teacher in my lab for 7 weeks, as he participated in directed field research and population genetics research.